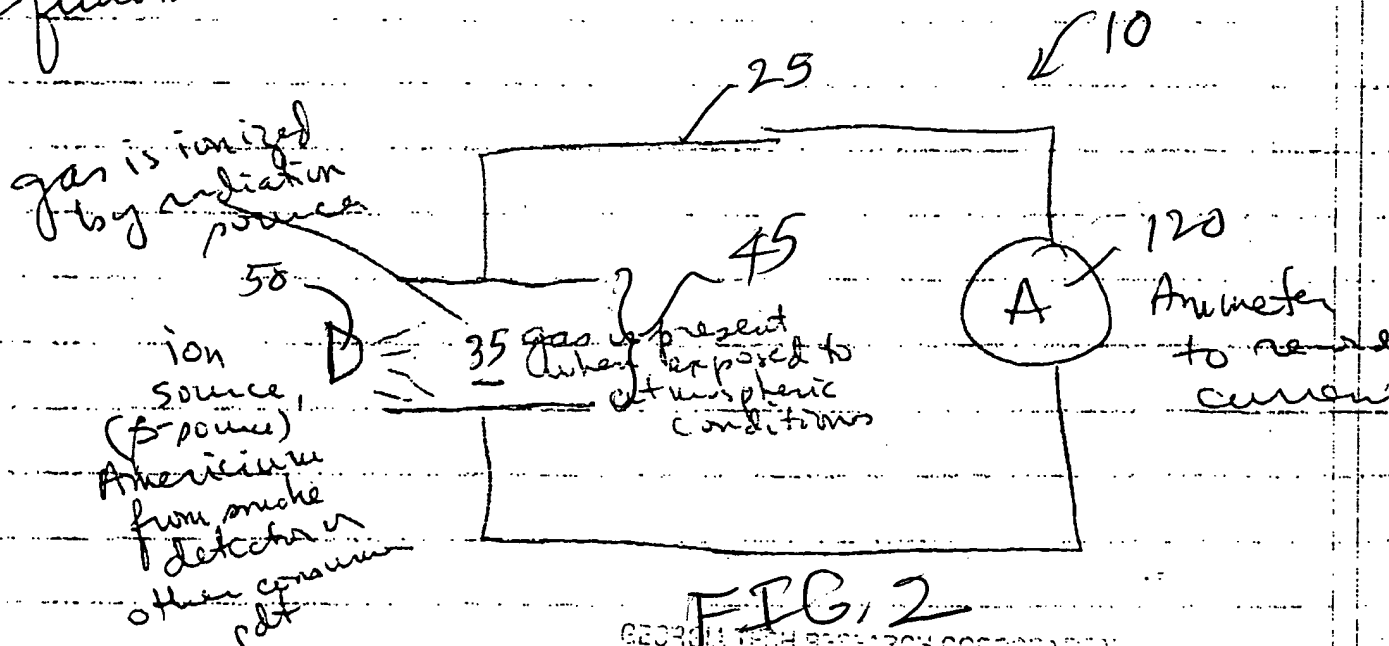
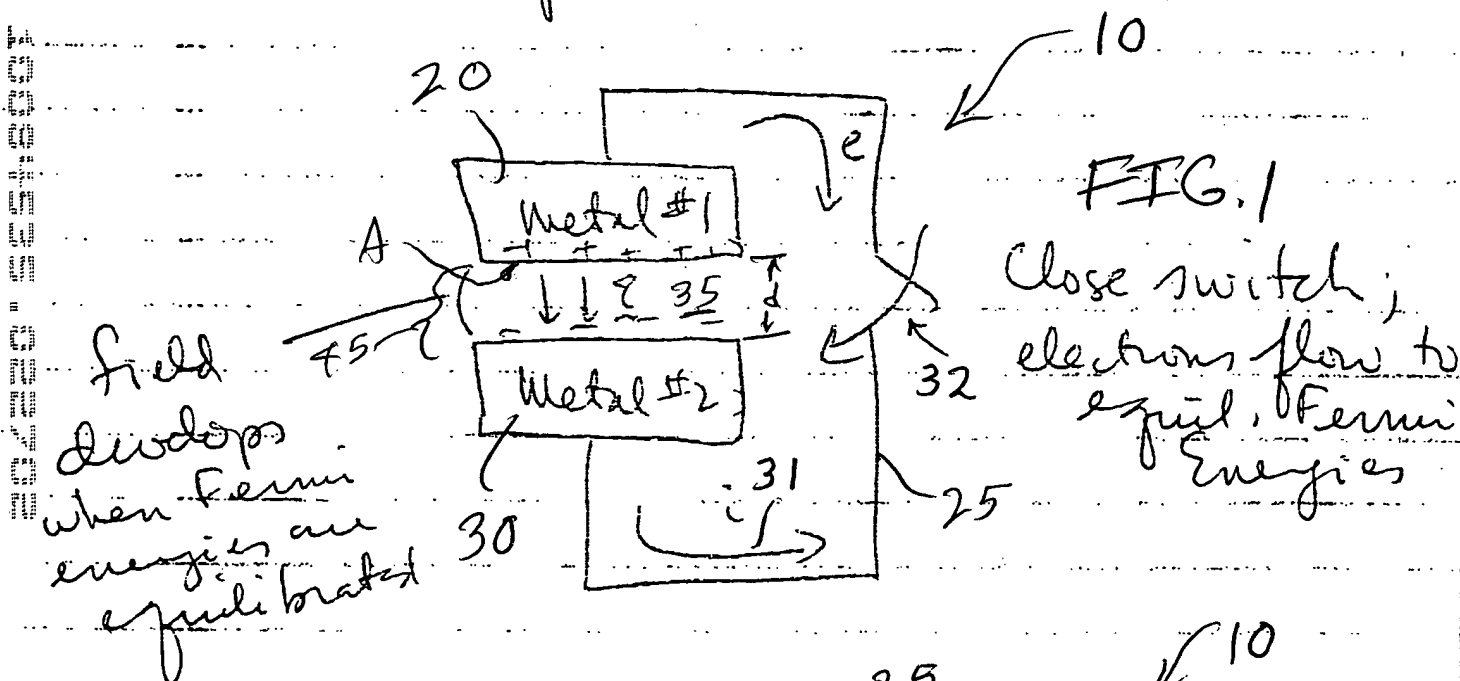


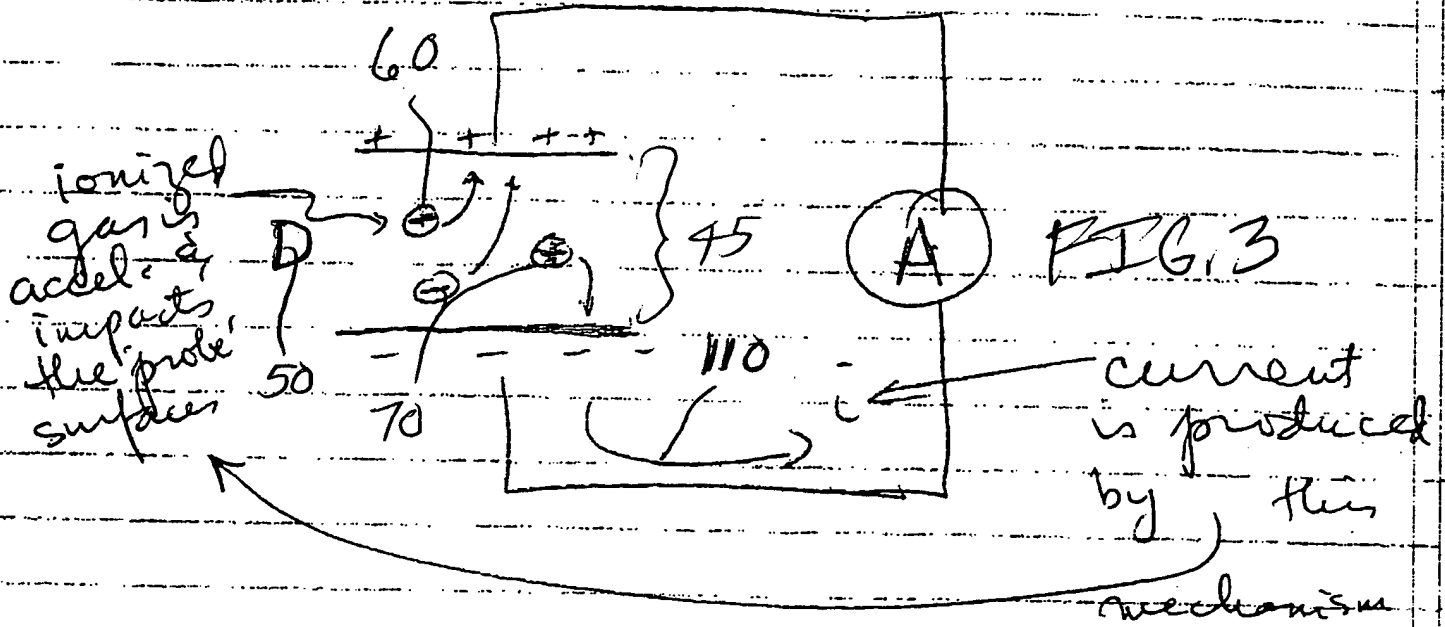
2/6/01

(1)

"Contact Potential Ionization Battery"

Concept:





ionization rate

$$i \propto (\eta)(\Delta\Phi)(\text{size of the probe surface})$$

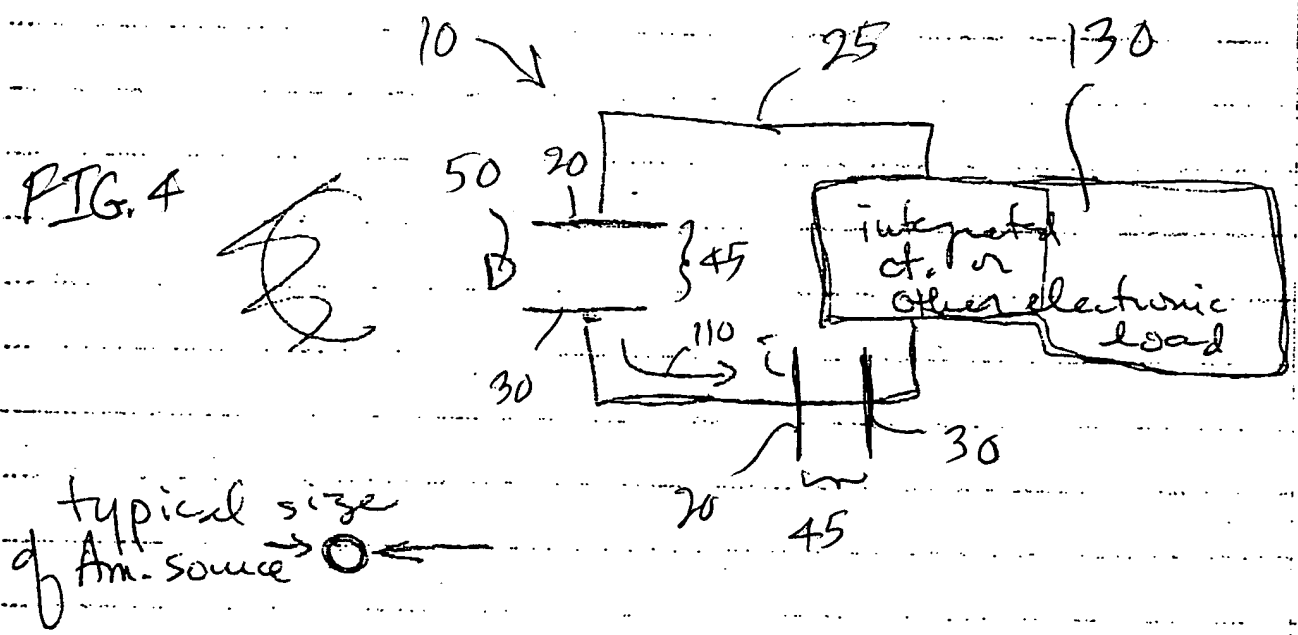
Work function difference

(1.) detail: η increases with pressure, temperature, type of gas, work function value (magnitude)

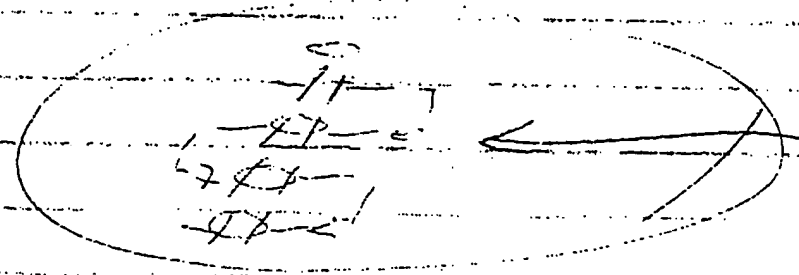
(2.) current is perpetual as long as gas is present and radiation source is present

3. current $\sim 10^{-8} - 10^{-9}$
(of that order)

Therefore this current is
avail. to drive other elect.
devices



4. Can 'integrate' battery into
silicon wafer



can stack
in series
to increase
the current